

(1) 查询指定列

- 查询通用语法格式

```
SELECT select_expr [, select_expr ...]
[
    FROM table_references
    [WHERE where_condition]
    [GROUP BY {col_name | position} [ASC | DESC], ...]
    [HAVING where_condition]
    [ORDER BY {col_name | position | expr} [ASC | DESC], ...]
    [LIMIT {[offset,] row_count | row_count OFFSET offset}]
]
* select_expr 查询表达式
* 每一个表达式表示想要的一列，必须至少有一个，多个列之间以英文逗号分隔
* 表示所有列  tbl_name.*表示某表的所有列
* 查询表达式可以使用[AS] alias_name为其赋予别名
* 别名可用于GROUP BY,ORDER BY或HAVING子句
```

- 查询所有列

```
mysql> create table if not exists book(
-> id int unsigned primary key auto_increment,
-> title varchar(100) not null,
-> author varchar(40) not null,
-> date date
-> );
Query OK, 0 rows affected (0.17 sec)

mysql> insert book (title,author,date) values('java','US',NOW());
Query OK, 1 row affected, 1 warning (0.05 sec)

mysql> insert book (title,author,date) values('mysql','Oracle','2018-11-11');
Query OK, 1 row affected (0.03 sec)

mysql> insert book (title,author,date) values('android','google',NOW());
Query OK, 1 row affected, 1 warning (0.07 sec)

mysql> select * from book;
+-----+-----+-----+
| id | title | author | date |
+-----+-----+-----+
| 1 | java | US | 2018-11-12 |
| 2 | mysql | Oracle | 2018-11-11 |
| 3 | android | google | 2018-11-12 |
+-----+-----+-----+
3 rows in set (0.01 sec)
```

- 查询指定列

```
mysql> select title,author from book;
+-----+-----+
| title | author |
+-----+-----+
| java | US |
| mysql | Oracle |
| android | google |
+-----+-----+
3 rows in set (0.00 sec)
```

- 别名查询 (as可不写)

```
mysql> select title as book_title,author as book_author from book;
+-----+-----+
| book_title | book_author |
+-----+-----+
| java | US |
| mysql | Oracle |
| android | google |
+-----+-----+
3 rows in set (0.01 sec)
```

(2) where条件查询

- and、or指定多个条件

```
mysql> select * from book where id>1;
+-----+-----+-----+
| id | title | author | date |
+-----+-----+-----+
| 2 | mysql | Oracle | 2018-11-11 |
| 3 | android | google | 2018-11-12 |
+-----+-----+-----+
2 rows in set (0.04 sec)

mysql> select * from book where id>1 and author='google';
+-----+-----+-----+
| id | title | author | date |
+-----+-----+-----+
| 3 | android | google | 2018-11-12 |
+-----+-----+-----+
1 row in set (0.03 sec)

mysql> select * from book where id>1 or author='US';
+-----+-----+-----+
| id | title | author | date |
+-----+-----+-----+
| 1 | java | US | 2018-11-12 |
| 2 | mysql | Oracle | 2018-11-11 |
| 3 | android | google | 2018-11-12 |
+-----+-----+-----+
3 rows in set (0.00 sec)
```

(3) like模糊匹配

- LIKE 子句中使用百分号 %字符来表示任意字符

```
mysql> select * from book where author like '%le';
+-----+-----+-----+
| id | title | author | date |
+-----+-----+-----+
| 2 | mysql | Oracle | 2018-11-11 |
| 3 | android | google | 2018-11-12 |
+-----+-----+-----+
2 rows in set (0.02 sec)
```

(4) limit/offset

- 查询个数和偏移
- [LIMIT {[offset,] row_count | row_count OFFSET offset}]

```
mysql> select * from book limit 2;
+-----+-----+-----+
| id | title | author | date |
+-----+-----+-----+
| 1 | java | US | 2018-11-12 |
| 2 | mysql | Oracle | 2018-11-11 |
+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> select * from book limit 2 offset 1;
+-----+-----+-----+
| id | title | author | date |
+-----+-----+-----+
| 2 | mysql | Oracle | 2018-11-11 |
| 3 | android | google | 2018-11-12 |
+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> select * from book limit 1,2;
+-----+-----+-----+
| id | title | author | date |
+-----+-----+-----+
| 2 | mysql | Oracle | 2018-11-11 |
| 3 | android | google | 2018-11-12 |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

(5) 排序

- [ORDER BY {col_name} [ASC|DESC]]
- 默认：升序
- ASC：升序
- DESC：降序

```
mysql> select * from book order by id ASC;
+-----+-----+-----+
| id | title | author | date |
+-----+-----+-----+
| 1 | java | US | 2018-11-12 |
| 2 | mysql | Oracle | 2018-11-11 |
| 3 | android | google | 2018-11-12 |
+-----+-----+-----+
3 rows in set (0.02 sec)

mysql> select * from book order by id DESC;
+-----+-----+-----+
| id | title | author | date |
+-----+-----+-----+
| 3 | android | google | 2018-11-12 |
| 2 | mysql | Oracle | 2018-11-11 |
| 1 | java | US | 2018-11-12 |
+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> select * from book order by id;
+-----+-----+-----+
| id | title | author | date |
+-----+-----+-----+
| 1 | java | US | 2018-11-12 |
| 2 | mysql | Oracle | 2018-11-11 |
| 3 | android | google | 2018-11-12 |
+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> select * from book order by date asc,id desc;
+-----+-----+-----+
| id | title | author | date |
+-----+-----+-----+
| 2 | mysql | Oracle | 2018-11-11 |
| 3 | android | google | 2018-11-12 |
| 1 | java | US | 2018-11-12 |
+-----+-----+-----+
3 rows in set (0.02 sec)
```

(6) 分组

- 查询结果分组—[GROUP BY {col_name | position} [ASC | DESC], ...] （ASC升序、DESC降序）
- 筛选结果按GROUP之后列排序，相同的只保留第一个，其它的略去
- 可指定列名分组、也可写1、2、3....指定按第几列分组

```
mysql> select * from book;
+-----+-----+-----+
| id | title | author | date |
+-----+-----+-----+
| 1 | java | US | 2018-11-12 |
| 2 | mysql | Oracle | 2018-11-11 |
| 3 | android | google | 2018-11-12 |
+-----+-----+-----+
3 rows in set (0.16 sec)

mysql> select * from book group by date;
+-----+-----+-----+
| id | title | author | date |
+-----+-----+-----+
| 2 | mysql | Oracle | 2018-11-11 |
| 1 | java | US | 2018-11-12 |
+-----+-----+-----+
2 rows in set (0.03 sec)

mysql> select * from book group by 1;
+-----+-----+-----+
| id | title | author | date |
+-----+-----+-----+
| 1 | java | US | 2018-11-12 |
| 2 | mysql | Oracle | 2018-11-11 |
| 3 | android | google | 2018-11-12 |
+-----+-----+-----+
3 rows in set (0.01 sec)

mysql> select * from book group by 4;
+-----+-----+-----+
| id | title | author | date |
+-----+-----+-----+
| 2 | mysql | Oracle | 2018-11-11 |
| 1 | java | US | 2018-11-12 |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

(7) having

- HAVING 语句中的字段在选择条件中必须有，此处为date，选择语句中只有id，所以不符合

```
mysql> select id from book having id > 1;
+-----+
| id |
+-----+
| 2 |
| 3 |
+-----+
2 rows in set (0.06 sec)

mysql> select id from book having date='2018-11-11';
/** HAVING 语句中的字段在选择条件中必须有，此处为date，选择语句中只有id，所以不符合
ERROR 1054 (42S22): Unknown column 'date' in 'having clause'

mysql> select id,date from book having date='2018-11-11';
+-----+-----+
| id | date |
+-----+-----+
| 2 | 2018-11-11 |
+-----+-----+
1 row in set (0.00 sec)
```